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ABSTRACT

As part of a research project examining interorganizational arrangements (IOAs) among educational agencies for school improvement, this study focused on one type of "freestanding" IOA, the industry-education council (IEC). "Freestanding" means the IOA is supported chiefly by its member organizations, not outside agencies. The author first reviews information from a national survey investigating industry-education-labor collaboration. Such collaboration was found to be recent, based on more traditional educational views, and characterized by common central purposes but diverse activities. A brief profile of the Industry-Education Council of California, a statewide network of IECs, is followed by a lengthy description of the Industry-Education Council of Santa Clara County (California). The author notes local educational needs, discusses the Santa Clara County IEC's origins, goals, staff, and activities, and reviews two of its projects, one on computer literacy and the other involving high school student employment resumes. The document concludes that successful industry-education collaboration is characterized by feelings of mutual ownership and commitment among participants, evidence of accomplishment, and involvement of non-members in some activities. Two appendices list the Santa Clara County IEC's membership and projects. (Author/RW)

Industry - Education Collaboration for School Improvement

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FOREWORD

This report represents a portion of a larger effort, supported by the Research and Educational Practice Unit of the National Institute of Education, to develop a more comprehensive understanding of how various types of educational organizations relate to one another in accomplishing school improvement projects. In a previous study* we identified, described, and analyzed the characteristics of 103 interorganizational arrangements (IOAs) involving educational agencies that were found in the 13 counties of the Greater San Francisco Bay Area. Several unexpected findings emerged from this study. First was the large number of arrangements identified. Second was the frequency with which educational organizations participated in arrangements: the range of frequency was between one and 18 arrangements; 67 percent of the 409 educational agencies identified participated in two or more arrangements. Third, all of the 231 Bay Area school districts were engaged in at least one arrangement, and 90 percent were in two or more. These findings indicate much more frequent formal connection among educational organizations than has been previously assumed or identified.

A two-dimensional, nine-cell classification system was developed to classify the arrangements. One dimension considered the legal status of the arrangement itself (mandated, enabled, or freestanding). When the 103 arrangements were classified by this two-dimensional system, no arrangements were found for two of the nine subclasses: a) mandated arrangement supporting a freestanding school improvement effort and b) enabled arrangement supporting a freestanding improvement effort. Most of the arrangements (86 percent) were focused on supporting mandated or enabled improvement efforts, and over three-fourths of the 103 arrangements belonged to one of the four classes in which there was joint external influence, mandated or enabled, on both the arrangement itself and the school improvement effort the arrangement supported. Only 14 percent of the arrangements were freestanding arrangements supporting freestanding improvement efforts.

This report provides information on one example of these free-standing arrangements (in which member organizations contributed most or all of the resources of the arrangement and for which there was no significant external requirement provided) that were voluntarily formed by agencies to support school improvement efforts. A second interesting aspect of this example is that the arrangement involves participation by educational and business organizations. The particular arrangement,

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*C.S. Cates, P.D. Hood, and S. McKibbin, An Exploration of Interorganizational Arrangements that Support School Improvement. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1981.

the Industry-Education Council, was selected for special study not only to provide more detailed information about this type of interorganizational arrangement, but also because this type of arrangement provides a promising model for successful collaboration between school districts and local business and industries, that can help to increase school resources, strengthen educational programs aimed at preparing students for employment, and improve communication between school staff and leaders in the local business community.

This study reviews findings of a recent national study of industry-education collaboration, briefly describes a statewide network, the Industry-Education Council of California, and then describes one particular arrangement, the Industry-Education Council of Santa Clara County.

Paul D. Hood
Educational Dissemination Studies Program

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Carolyn S. Cates

INDUSTRY-EDUCATION COLLABORATION FOR SCHOOL IMPROVEMENT

Introduction

Since the mid-1960s, formal interorganizational arrangements (IOAs) have become an important mechanism for supporting improvement activities in education. Organizational participation in such arrangements has been based on the assumption that collaboration will enhance improvement efforts by extending or multiplying limited resources and by reducing or avoiding unnecessary duplication of effort. Although no one knows just how many arrangements exist today, one recent study has estimated that there are from 2,000 to 4,000 nationwide (Cates, 1981). Findings from another study (Cates, Hood, and McKibbin, 1981) suggest that most arrangements involve only educational organizations such as school districts, intermediate service agencies, and institutions of higher education. In addition, the findings suggest that most arrangements involve some form of requirement or enabling support from an agency or agencies external to the organizations participating in the arrangement. Usually, the requirements and/or support emanate from federal or state agencies. Familiar examples include federally sponsored Teacher Corps Projects which involve formal collaboration between local school districts and colleges or universities, and special education consortia formed among school districts and/or intermediate service agencies in response to federal and sometimes state legislation.

However, there are also many instances in which educational agencies and private businesses and industries collaborate in primarily voluntary or freestanding arrangements in order to carry out some locally important improvement effort. In addition to extending resources and reducing

duplication of effort, these arrangements serve the equally important purpose of providing a means for increasing and improving communication and understanding between two communities that are often divergent in their goals, modes of operation, and perceptions of one another.

At a time when federal and state resources for education are being rapidly reduced and when public attention is increasingly focused on improving public education, local partnerships between education and business and industry hold great potential for continuing existing school improvement efforts and initiating future efforts.

The purpose of this report is to briefly review existing information about collaborative councils--one form of business-education partnership--and to provide examples of one statewide network and of the activities of one local council.

A General Definition and Distinguishing Characteristics

An interorganizational arrangement (IOA) is defined as a formal collaborative arrangement of some enduring significance between or among two or more permanent organizations. The main feature of the definition is the notion of organizations collaborating or "doing something together," such as pursuing common programmatic goals, establishing consensus over valued domains, or acquiring, exchanging, or allocating resources (Stern, 1979).

Four essential features are encompassed within this general definition. First, the agreement itself is between or among the member organizations. Although individuals carry out the collaborative activities, they do so primarily as representatives of their respective organizations rather than as individual participants in a social network.

Second, the formality of the arrangement is signified by an official, regularized agreement that denotes the purpose of the arrangement, the level of investment (e.g., dollar constributions, in-kind services) required of members, and the activities to be conducted. Third, the emphasis on collaboration--"doing something together"--distinguishes an IOA from other arrangements that are primarily purchase agreements for materials, supplies, or services. Fourth, the notion of "some enduring significance," although not bound by a specific time duration, distinguishes an IOA from joint efforts that are periodic, short-term, or one-time efforts (e.g., joint sponsorship of a single workshop or conference).

Collaborative councils, as a particular form of IOA, are further distinguished by five characteristics:

- Council membership is representative of major sectors in a community; collaborative mechanisms are intended to join and serve the interest of more than two sectors. Councils should be designed to treat education, industry/business, labor, government, and youth service institutions as equal partners. In local practice, the interest and strength of one or two sectors may predominate, but the goal of collaborative councils is to seek balance of multiple purposes rather than exclusivity.

- Collaborative councils are essentially self-organized. Initial sponsorship may come from one sector or even a single organization. But once organized, the council is responsible for its own continuity. Neither membership nor agenda is assigned to the collaborative partners by a single institution.

- Collaborative councils are performance-oriented. Members and staff develop their own agenda and approaches to community needs. Such councils may choose to play advisory roles ranging from fact-finding to project operation, to program development, to program brokering and catalyzing.

- Most crucially, council members and the institutions they represent share responsibility for implementing the action agenda that brought them together in the first place. Members exercise active leadership within their primary constituencies and with other sectors and constituencies. Collaboration implies a recognition of shared interests that lead to mutual action.

- Organizational activity is sustained through formal council organization, with assistance from a staff director or coordinator. (Fraser et al., 1981, pp. viii-ix).

An Overview of Collaborative Councils

The most recent, broadly informative information about collaborative councils stems from a two-year Industry-Education-Labor Collaboration Project conducted by the Center for Education and Work of the National Institute for Work and Learning (formerly the National Manpower Institute). Funded by the Office of Vocational and Adult Education in the U.S. Department of Education, the project was designed to highlight and "to respond to the increasing nationwide interest in collaborative councils and to support the policy and planning needs" of the sponsoring agency (Elsman, 1981, p. vij). The project findings are presented in four publications:

Fraser, B .S., et al. Industry-Education-Labor Collaboration: The Literature of Collaborative Councils (1981).

Gold, G .G., et al. Industry-Education-Labor Collaboration: A Directory of Collaborative Councils (1981).

Elsman, M. Industry-Education-Labor Collaboration: An Action Guide for Collaborative Councils (1981).

Gold, G .G., et al. Industry-Education-Labor Collaboration: Policies and Practices in Perspective (early 1982).

The present overview is derived primarily from the first three reports.

Several interesting features emerge from this body of information. First is the recency of the majority of the arrangements. Of the 161 councils identified across 32 states and the District of Columbia, 88 percent had been established since 1970 and most of these since the mid-seventies. Of the total, only six had a history of 20 years or more of formal collaboration.

Second, in spite of the recency of the arrangements and the literature reviewed for the project, educational perspectives apparent in both the arrangements and the literature reflect a resurgence of the more traditional educational views. Compare, for example, the following two statements--the first a summary of an important theme in the current literature, and the second, a much earlier theme:

> Individual learners will be motivated to develop academic and vocational skills and positive attitudes towards society if in-school learning is closely linked in the learner's mind to relevant people, places, and oportunities in the immediate community and the larger society. Improved motivation may, in turn, reduce both anti-social behavior and the need for costly remedial programs. (Gold, G. G., in Fraser et al., 1981, p. xvii)

> The school must represent present life--life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the playground ... the best and deepest moral training is precisely that which one gets through having to enter into proper relations with others in a unity of work and thought. (Dewey, My Pedagogic Creed, 1897, in Fraser, op. cit., p. xiv)

A third feature is the commonality of the central purposes found across the councils as contrasted with the diversity of activities carried out by the councils. In view of the central educational perspective apparent in the literature, it is not surprising to find two related central purposes or goals stated or implied in most of the council descriptions: 1) to improve communication and linkages between business (and/or labor) and education; and 2) to facilitate youth transition from education to work. However, it is somewhat surprising to find the wide range of activities carried out under the umbrella of these purposes. Elsman (1981) succinctly addresses the issue of variety:

> So what does a council do? Given the diversity of communities, councils, and their leadership, the answer must be: almost anything it and its community have the resources and commitment to take on. (p.13)

More specifically, many of the activities are directly related to the education-work transition: for example, conducting surveys of community opportunities for skill training and work experience; conducting employment needs analyses and forecasts; sponsoring and conducting career education seminars and workshops for students and for teachers and counselors; serving as advisory groups and directly participating in improvement programs for vocational education and job training. Many other activities involve participation in much broader educational issues or areas. For example, some councils have been actively engaged in planning school desegregation and providing direct assistance in planning and implementing magnet schools. Others are involved in adopt-a-school programs and assist or participate in all areas of the adopted school's activities. Still others sponsor or develop curriculum packages (e.g., in economic education), some of which have been adopted by numerous additional districts.

Fourth, there appear to be three clearly differentiated patterns of operation or styles that councils use to carry out their goals and activities. Elsman (1984) has identified these as the "service provider" style, the "facilitator/broker" style, and the "special projects" style. Although councils may operate predominantly in one of the styles, some features of each are usually present in most councils.

A Statewide Network in California

With 22 local or area councils and similar organizations, California has more industry-education partnerships than any other state. Although the individual councils share a central goal of improving the transition from classroom to employment, all are very much local-level operations

with different origins, histories, and organizational structures. Each is an individual, locally responsible entity based on existing community elements, and specific activities vary according to community needs and interests. Most are organized as non-profit agencies with their primary source of ongoing funding coming from membership dues and a small housekeeping allotment from the statewide umbrella organization, the Industry-Education Council of California (IECC).

Funds for special projects come from various sources such as the state Career Education Incentive Act, Private Industry Council funds, federal CETA funds, and the statewide council. Of the 22 local councils, only seven have paid staff. The rest carry out their activities through project task forces, standing committees, or volunteer assignments among member organizations and their representatives.

At the state level, the Industry-Education Council of California is a separate, non-profit organization. The functions it performs in this capacity should be especially familiar to those engaged in other educational dissemination and school improvement activities:

> It acts as a catalyst, linking agent, resource coordinator, and implementor for national, state, and regional education-to-work activities. It also identifies promising practices, concepts, and develops pilot demonstrations that can be adapted at the state, regional, or community levels. (Business and 5 Million Californians in School, 1980, p.2.)

From its origin in 1974, the IECC has had the direct sponsorship of a great number of corporations representing a wide variety of industries (e.g., banking, manufacturing, transportation, and electronics) and the active participation of equally numerous and varied education and public agencies (e.g., school districts, county offices of education, statewide professional associations, community colleges, and state and federal human service agencies). By 1981, the state council

had over 100 direct corporate sponsors and 68 direct education/public agency participants. When local-level members are included, more than 1,200 agencies participate in California IECC activities. The state council's governance is the responsibility of a 60-member board of directors, drawn from the upper levels of member organizations. Its activities are directed by a 12-member executive committee. Administration is carried out by paid staff and loaned executives from business and education, and is headed by an executive secretary. Among the programs directly implemented or coordinated by the IECC are: career exploration and work experience projects; educator training clinics for establishing business-education collaboration; community career resource centers; magnet career learning centers; and motivation programs for elementary students and their parents. In addition, the council maintains a special fund for "hot ideas"--local programs of merit--and serves as fiscal agent for local councils participating in state or national projects awarded through or coordinated by the IECC. These and other activities and services are supported with an estimated (1980) annual budget of just over one million dollars supplemented by nearly equivalent in-kind services from members. The fiscal amount is split almost evenly between direct memberships and loaned executives from business and education and funds awarded primarily by public agencies for special projects.

The Industry-Education Council of Santa Clara County

Formed in November 1978, the Santa Clara County IEC is one of the most recent and most active of the California councils. It is set in an area having some unique characteristics that both positively and negatively influence efforts to establish and carry out collaborative activities.

The county encompasses 1,300 square miles, extending from the heavily populated southern end of the San Francisco Bay peninsula inland through suburban communities and rural farming areas in the southern end of the county. With a 1978 population of 1.2 million, it is the largest of the northern California counties. Widely known as the Silicon Valley, the county's business and industrial sector has been increasingly dominated by advanced electronic technology firms. In 1980 more than 500 high-technology businesses employed 17 percent of the county's 600,000-person workforce; by 1985 this industry is projected to provide as much as one third of the county's total employment (Useem, 1981). Partly due to this rapid expansion, the county has the fastest population and economic growth rate in the nation. (The city of San Jose, which accounts for over half of the county's population, advertises itself as the fastest-growing city in the country.) Long noted for its affluent communities, such as Palo Alto and Los Gatos, since 1975 the county as a whole has become the most affluent metropolitan area (per capita) in the state (Useem, 1981).

Given these conditions, it would appear that community resources, especially from the business sector, would be richly and widely available for cooperative improvement efforts in local schools. Yet some

barriers to collaboration have been raised by the combination of the extraordinarily rapid expansion of an industry that requires highly skilled and technologically sophisticated employees, even for entry-level positions, and the severe and continuing cutbacks in local, state, and federal educational funds.

At a time when community employment requires increased educational emphasis on mathematics and science in the general curriculum and on electronics, computing, and other technological skills in vocational and occupational programs, these are often among the programs most severely affected by cutbacks. Two examples cited by Useem (1981) reflect extreme but not isolated situations and also point to additional difficulties:

> At the Regional Vocational Center in San Jose, a highly regarded school serving six school districts which offers programs in such demand fields as computer operating and electronics, the capital outlay budget has been slashed from approximately $85,000 to almost nothing. Lack of new equipment will soon begin to impair the quality of instruction offered at the school, including some programs useful to high technology industry such as machine shop and welding.
>
> In the affluent northernmost part of Santa Clara County, the administrative staff of the Regional Occupational Program (ROP), which services three high school districts, has been cut from seven to one, and the program has also suffered from the same extreme drop in enrollment experienced by all schools in that area. Few programs relevant to high technology employment are now offered by the ROP, and the local schools are unwilling to start new innovative industrial arts courses in the face of budget cuts and low student demand. As the local high schools cut the courses that are prerequisites for the more advanced ROP courses, usually offered at sites away from students' home high schools, the ROP courses either fall by the wayside or are taught at a more elementary level. The drop in federal funds for vocational education has also hurt these programs. Qualified teachers, lured by higher salaries in industry, are scarce and turnover is high. For example, in the North County ROP, instructors for the electro-mechanical drafting class frequently come and go, and in the last round of hiring, there was only a single applicant for the position. Moreover, a survey of the career plans of over 9,000 students in the ninth and eleventh grades

> in North County schools (Fremont Union, Palo Alto Unified, and Los Altos-Mountain View Union) shows no significant interest in scientific or technical careers. Like students everywhere in the U.S., the most popular career choices were performing artist, doctor, pilot, lawyer, and professional athlete. Electrical engineer ranked eleventh on the list and electronic technician placed 42nd. (pp. 5-6)

In the absence of direct and ongoing communication to provide mutual understanding of the broader issues and contributing factors in such situations, the business and education sectors easily can (and often do) perceive conditions and each other in very different lights. From the business perspective, cutbacks and declining enrollments in programs may be thought of primarily as unresponsiveness on the part of education to critical community needs. From the education perspective, the business sector may be seen as contributing to an already difficult situation by "raiding" the diminishing pool of teachers most necessary to carry out even minimally adequate programs. For students and the community as a whole, the disjunction between available jobs and available training means a rising youth unemployment rate (and potentially, concomitant increase in delinquency). If such extreme perspectives were the only views, efforts to collaborate on improving these situations would be at a stalemate.

Fortunately, the general environment for cooperative improvement efforts is stronger in California, and especially in Santa Clara County, than in many other areas of the country. For example, numerous county businesses participate in the statewide California Roundtable which has sponsored conferences and other activities aimed at forging more positive relationships between schools and businesses. In addition, two university-based programs in the county are affiliated with the statewide Mathematics, Engineering, Science Achievement (MESA) Program which

receives strong support from business and industry at both the state and local levels. Still others are active in sponsoring high school Junior Achievement Programs and adopt-a-school projects.

Educational agencies within the county are particularly active in working together in formal arrangements. In a recent exploratory study of formal collaborative efforts in 13 Bay Area counties (Cates, Hood, and McKibbin, 1981), Santa Clara stood out both in the total number of arrangements and in the frequency with which individual educational agencies participated in arrangements. For example, county agencies were involved in almost one quarter of the 103 arrangements identified in the study. The county office of education participated in 18 arrangements, many of which it had been instrumental in initiating and coordinating. Participation by the 33 school districts in the county ranged from three to eight arrangements per district. Among these cooperative efforts were special education consortia, career education consortia, Teacher Corps projects, Teacher Centers, and proficiency assessment consortia in addition to the previously mentioned MESA Programs and the Regional Occupational Programs.

In this context, the county IEC has developed an active and increasingly recognized set of projects primarily targeted directly to students in county schools. In the exploratory phase of council formation, groups of interested educators and business representatives met separately. The purpose of the separate meetings was to allow each group to "clear the air" of biases and concerns they might have about working together, and to identify some areas or issues they felt might realistically be addressed in a cooperative venture. The meetings also served to establish the notion that the council could serve as a

"neutral turf" where business representatives and educators could work together on concerns of mutual interest.

From the beginning, both employers and educators have recognized substantial reasons to be involved as IEC members. For employers, the council is an avenue of direct influence and penetration into school planning and operation, as well as a means of focusing their investments in school support; for educators, it is a primary means of determining what employers want from schools, generating resources for programs, and improving the public image of schools.

From the outset of joint meetings and the actual formation of the council, three areas were established as priority goals and objectives: 1) to increase communication and linkages between business and education; 2) to promote pilot demonstration activities to improve youth transition from school to work; and 3) to improve the delivery of services to youth from the various county agencies and employers. Underlying these goals is the philosophical view that schools have two primary client groups--students and employers--and that the results of the educational process should be targeted to both groups. Under this philosophy, employers are seen as natural partners with educators in supporting and participating in educational improvement efforts.

Since the council was formed in 1978 with 18 members (evenly divided between educational agencies and business or business-related organizations), its December 1981 membership had almost doubled to 34 organizations (15 business or business related organizations and 19 educational agencies). Only one of the original members had withdrawn, the National Alliance of Business (which dissolved). The present members are listed in Appendix A; original organizational members

are marked with an asterisk. Established as a non-profit organization, the council is governed by a board of directors composed of a representative of each member institution (there are no individual memberships). All of the organizations are represented by mid-level or upper-level executives on the assumption that organizational commitments can be made more firmly and necessary resources allocated more quickly to IEC projects by representatives with upper-level authority and responsibility. Leadership for the board is provided by three elected officers (president, vice-president, and secretary/treasurer), the past president, and chairpersons of standing committees for planning, projects, and communications. This seven-member executive board, with approximately equal industry and education representation, sets council policy and oversees operations. Ad hoc task forces are created to plan and carry out special projects. Depending on the nature of the project, task forces may include representatives of non-member organizations as well as board members and other member representatives. During the first three years of operation, regular, formal meetings of all IEC members were held only once a year, with an executive board meeting monthly. More recently, the council has instituted a schedule of quarterly meetings for all members and monthly meetings of the seven-person executive committee. The change was proposed to provide members with a more direct voice in council activities and to provide a regular forum for communication among members and guests (e.g., legislators).

At present, staff support for the council consists of a full-time executive director, who has held this position since the council's inception, and a secretary. The executive director, a career educational administrator, is a loaned executive from the county office of

education. Although a portion of his salary is paid by the county office, he works for and is responsible to the council. Under the current operation, the executive director is responsible both for promoting LEC interests and activities and for managing specific projects and council activities. However, the board is seeking sources of increased funding to provide additional staff so that more of the director's efforts can be focused on promotion and development activities. Ongoing funding comes primarily from membership fees and contributions. Grants from federal and state agencies have been received for some specific, limited-term projects. In addition, the county office of education, where the council office is housed, provides in-kind services and a portion of the funds for office operation, and the state IECC provides a small annual "housekeeping" grant.

Over its three years of operation, the council has engaged in a wide variety of projects and activities. In addition to providing a communication forum for its own membership, it has piloted a countywide newsletter for increasing business-education communication; has provided inservice workshops for educators to better inform them about the employment needs and resources of the community; has served as resource and information broker between the business and education sectors; and has developed proposals for activites such as a clearinghouse for countywide resources. An annotated list of example projects is provided in Appendix B.

However, from the council's inception, the major emphasis has been on "doing things" and "getting results." Its major activites have been organized around identifying and implementing resources and influences that can be applied to bring improvements as soon as possible. With

this orientation, it has operated primarily in the special-project mode, concentrating particularly on demonstration projects that can be incorporated into the regular programs of existing youth-serving agencies and that can be replicated or adapted in other communities. In this regard, the council has been a catalyst for trying out new or alternative solutions to specific community problems. Two current projects illustrate these kinds of activities and the council's approach to implementation.

Mobile Computer Van. This locally funded project was initiated in 1981 as one approach to combat the low computer literacy in the schools. Although students were identified as the primary long-term "clients," the project was also intended to increase the interest and skills of educators in using computers in the schools. The project evolved from an earlier, separately conceived series of three computer awareness/literacy workshops for educators held in the fall of 1980. For most of the 300 participants, the workshop was their first concentrated and hands-on experience with microcomputers and their first exposure to the variety of educational applications. Although the council initiated and coordinated the meetings, the workshop activities were carried out by a combination of member and non-member representatives from both business and education. For example, numerous non-member computer vendors provided hardware and software for demonstrations and hands-on experiences, and a number of computer-using teachers participated to assist first-time users. Released time for some of these teachers was paid for by participating businesses.

As a result of the interest and needs expressed in the workshops, a council task force developed a proposal for submission to microcomputer manufacturers to set up a mobile computer van program. Although

the plan was based on the model developed by the Lawrence Hall of Science at the University of California, the operational aspects of the proposal were deliberately open-ended to allow for and encourage wide participation and sponsorship. The project was initially capitalized at about $80,000. Most of the original funding was provided by the Atari microcomputer company which had just joined the council. The van with its 15 learning stations is provided and maintained by the county office of education; a fund for vehicle operations was provided by Chevron, a member of the state organization, and several local IEC members gave direct contributions and/or support. The first instructor was made available by San Jose Community College. The Computer-Using Educators group and local computer stores provided software and supplies. Schools served by the van pay $50-$60 an hour to offset operational costs.

After a six-week pilot test near the end of the 1980-81 school year, the project was fully implemented in the fall of 1981. During the first semester of operation, the computer van served 49 separate schools, 165 separate classes, and 4,950 students. For the spring semester 1982, it is scheduled to serve an additional 27 schools and 3,300 additional students. Also scheduled are faculty inservice programs at 34 schools and 25 other special presentations at educational workshops and conferences.

Career Passports. Santa Clara County is one of three national sites for the implementation of this demonstration project (Lexington, Kentucky and Worcester, Massachusetts are the other sites), originally funded by the U.S. Department of Labor through the statewide Industry-Education Council of California. The purpose of the project is to provide an easily implemented method of documenting employability skills

for the 50 to 80 percent of high school students who have little or no previous employment experience. In Santa Clara County, the model has been designed to be incorporated into the regular school curriculum and into career education and counseling activities.

In the first phase of the project, begun in May 1980, a 35-member panel of employers was constituted to assess alternative approaches and to develop specifications for the content, format, and procedures of the passport. The basic idea was to construct a resume form for translating life experiences into employability traits and skills. Based on employer input, the project has devised a format that takes as little as 30 minutes for students to fill out and an additional 20-30 minutes to enter into the computer. Once in the computer, it can be printed out in five minutes or less and can be easily updated as a student's employability improves.

Once the passport was designed and the procedures tested, school district superintendents on the IEC were asked to recommend pilot sites from different districts, with different sizes, locations, and student populations. From the recommendations, four schools were selected on the basis of the principals' agreement to participate actively in the project and to provide released staff time for project orientation and periodic evaluation. By the end of December 1981, approximately 2,000 students had completed passports. Response to early stages of implementation from both employers and educators has been favorable. Potential employers increasingly see the Career Passport primarily as a springboard for job interviews, and within the pilot schools, counselors have found the passports useful as a starting point for advising students and assisting them in planning their career alternatives. In addition,

students have found the passports to be valuable adjuncts to applications for college entrance and scholarships.

Through the network of the state IEC, the model developed by the Santa Clara council will be actively disseminated to other local councils and schools; the state council is actively pursuing potential funding for implementation at other sites. One recent result has been a $14,000 award by the Bank of America to the Santa Barbara IEC to initiate a Career Passport project at the Dos Pueblos High School.

Department of Labor funding for the original Santa Clara project ended in December 1981, short of the planned time to develop the passport. However, use of the Career Passports will continue in the four original schools. In addition, work has begun to develop alternative applications for use in other settings including adaptations for the eight juvenile court schools in Santa Clara County and for two delinquent placement projects conducted by the Santa Clara council. Funds to support this adaptation phase are expected to be successfully negotiated by mid-January 1982.

Comparisons and Implications

In a brief overview such as this, firm generalizations cannot be drawn about collaborative efforts. However, some comparisons with other educational arrangements can be made and some potential implications can be suggested. One important similarity between business-education collaboration and other educational arrangements is the general principle that successful collaboration must begin with a strong feeling of mutual ownership on the part of the participants. This point is repeatedly emphasized in the general literature and

interviews reported in case studies (especially in McKibbin, 1981). No one organization or small group of organizations can dominate or be perceived to dominate the decisions, resources, or activities of the arrangement if it is to be successful. Neither can the commitment of a single individual or organization keep the collaboration going indefinitely if the group as a whole fails to establish or loses a sense of ownership.

The local IEC described here has carried the notion of organizational commitment farther than do most educational IOAs, by requiring executive-level representation. This form of demonstrating commitment seems an especially sound guideline when organizations from different sectors are working together. Particularly at the outset of the relationship, decisions and actions can be taken more quickly if differences of perspective and operational methods can be negotiated directly among the organizational leaders.

A corollary and contributing factor to commitment and ownership is "getting results." Whether the cooperative effort focuses on short-term projects or a sustained program of activities, members must be able to see and report evidence of accomplishment related to the purposes and goals of the joint venture. A second corollary factor is the importance of selecting tasks and activities that are appropriate to the needs, interests, and resources of the member organizations. Interest and commitment will dwindle rapidly if members believe that they give more than they get, even symbolically, or believe themselves to be unnecessary to the accomplishments of the group.

Another important similarity is the involvement of non-member individuals and organizations in some activities of the collaboration.

This kind of involvement can be especially useful in planning and designing projects and activities by way of broadening the perspectives and pool of ideas available to the member organizations.

Although it is more likely to be the case in collaboration among multiple organizational sectors, there also are instances in other educational arrangements (e.g., Teacher Centers) when the arrangement itself or some specific activity of the arrangement provides a neutral turf on which participants can set aside differences to address mutual concerns and problems. Whether or not creating such an environment is a central purpose of any arrangement, establishing this kind of context for cooperation can only be a positive contribution.

Finally, dissemination of the Career Passport project through the statewide IEC network demonstrates the usefulness of a network among organizations, projects, or interorganizational arrangements with similar goals and programs. Whether the network is itself a formal organization or interorganizational arrangement (as in this case) or an informal network among coordinators or directors of interorganizational arrangements, the extended contacts provide an additional vehicle for sharing useful results of individual projects or arrangements. Analogs among educational arrangements include formal networks such as the formal Teacher Corps Regional Networks and the quasi-formal California Staff Development Network.

APPENDIX A:

The Industry-Education Council of Santa Clara County: Membership List

The Industry-Education Council of Santa Clara County:

Membership List 1981--1982

Listed below are the 34 member organizations and their representatives (and positions) as of December, 1981. Of the 34 members, 15 are businesses or business related and 19 are educational agencies (13 school districts, 1 elementary school, 4 community colleges, 1 county office of education). Also listed is one original member that has since been dissolved. The original organizational members are marked with an asterisk.

The board of directors includes the representatives of all current member organizations. The seven-member executive board is composed of three officers elected annually (the president, vice-president, and secretary/treasurer), the appointed chairpersons of three standing committees (planning, projects, and communications), and the past president. Member representatives holding these positions are indicated below. The executive director serves as an ex officio member of the executive board.

Executive Director

Ernie A. Hickson
100 Skyport Drive
San Jose, CA 95115
(408) 947-6662

Business and Business Related Members	Member Representatives and Positions
ATARI Sunnyvale, CA	Dennis Groth Executive Vice President
*Bank of America Morgan Hill, CA	Karl Hauser Vice President IEC Secretary/Treasurer
Fairchild Corporation Mountain View, CA	Richard Johanson Deputy General Manager, Personnel
Four Phase Systems Cupertino, CA	Bob Coon Manager, Employee Relations & Development

Business and Business Related Members	Members Representatives and Positions
General Electric Company San Jose, CA	Robert Bell Manager, Employee Communication & Relations IEC President
*Hewlett-Packard Palo Alto, CA	Bill Higgins Personnel Development
*I.B.M. San Jose, CA	Norm Kreiser Laboratory Personnel Manager
*INTEL Corporation Santa Clara, CA	Jay Elliot California Site Personnel Manager
*Lockheed Missles and Space Sunnyvale, CA	Jack Shoenhair Manager, Community Relations
Marriott's Great America Santa Clara, CA	Jeff Flynn Personnel Manager
National Semi-conductor Santa Clara, CA	Mark Bernardi Corporate Manager, Training and Development
*Pacific Gas and Electric San Jose Division San Jose, CA	Donald Peerson Division Marketing Manager
*Pacific Telephone Company San Jose, CA	Don Peters Director, Community Relations IEC Planning Committee Chair
*San Jose Chamber of Commerce San Jose, CA	Ray Sittig F.W. Woolworth, Manager
*Santa Clara County Labor Council San Jose, CA	Currently without an active representative

*National Alliance of Business (discontinued member)

Education Agency Members	Member Representatives and Positions
*Alum Rock Union School District San Jose, CA	Bill Jefferds Superintendent IEC Projects Committee Chair
*East Side Union High School District San Jose, CA	Frank Fiscalini Superintendent
Foothill-DeAnza Community College Los Altos, CA	Thomas Fryer, Jr. Chancellor
Franklin-McKinley School District San Jose, CA	Ralph McKay Superintendent
Fremont Union High School Distict Sunnyvale, CA	Jack Roper Superintendent
Gavilan Joint Community College Gilroy, CA	R.J. Malone Superintendent/President
Lakeside School Los Gatos, CA	Fred Knipe Principal
Los Gatos Joint Union High School District District Los Gatos, CA	Paul Collins Superintendent
*Mission College Santa Clara, CA	Candy Rose President IEC Communications Committee Chair
*Milpitas Unified School District Milpitas, CA	Pete Mesa Superintendent
Morgan Hill Unified School District Morgan Hill, CA	Robert Stannard Superintendent
*Mountain View-Los Altos Unified High School District Mountain View, CA	Paul Sakamoto Superintendent

Education Agency Members	Member Representatives and Positions
Oak Grove School District San Jose, CA	Robert Lindstrom Superintendent
San Jose Community College District San Jose, CA	Richard Goff Superintendent
*San Jose Unified School District San Jose, CA	Lillian Barna Superintendent
*Santa Clara County Office of Education San Jose, CA	Glenn Hoffmann Superintendent IEC Past President
Santa Clara Unifiid School District Santa Clara, CA	Rudy Gatti Superintendent
Union School District San Jose, CA	Arthur Doornbos Superintendent
Whisman School District Mountain View, CA	Duane Bay Superintendent

APPENDIX B:

Examples of Activities and Projects

of the Santa Clara County IEC

Examples of Activities and Projects of the

Industry-Education Council of Santa Clara County

Educator-Employer Exchange (Spring 1980)

This meeting of 100 chief executive officers of county business and educational agencies provided a high-level forum for identifying a "menu" of suggested IEC activities. Participants included representatives of both member and non-member organizations.

Computer Awareness Workshops for Educators (Fall 1980)

In three separate workshops, a total of 300 educators were provided with an opportunity for concentrated, hands-on experience with microcomputers and were introduced to the variety of educational applications. The IEC sponsored and coordinated the workshops which also included participation by computer vendors and teachers for presentations and demonstrations. The Mobile Computer Van Project evolved partially from this project.

Career Passport (1980-present)

Originally funded by the U.S. Department of Labor, the purpose of this project is to provide an easily implemented method of documenting employability skills of the 50 to 80 percent of high school students who have no previous employment experience. By December 1981, approximately 2,000 students had completed passports. The IEC intends to adapt the passport to other school settings (e.g., juvenile court schools) and to expand its use to other schools in the area, the state, and beyond.

Mobilizing Industry for Youth (1981-1982)

The Santa Clara County project is one of three California sites (Alameda and Sacramento Counties are the others) funded by the Federal Criminal Justice Program through the statewide IEC. The purpose of the project is to divert delinquency-prone youth away from the criminal justice system by assisting them to find and stay in jobs. Of the over 200 students the project has assisted in finding jobs in Santa Clara County, about 70 percent have remained in those jobs.

Mobile Computer Van Project (1981-present)

This locally funded project provides a mobile computer van with 15 learning stations, an instructor, and a driver who also assists the teacher during instruction. By the end of the spring 1982 semester, the project will have served approximately 8,250 students in 275 separate classes at 76 schools.

Youth Motivation Task Force (ongoing)

This program was initiated by the National Alliance of Business and was picked up by the Santa Clara IEC when the NAB dissolved in 1981. The task force recruits and coordinates scheduling for business volunteers to participate in classroom discussions about the kinds of jobs and careers held by the volunteers. About 85 volunteers participate each year.

Educator Visits to Industry (ongoing)

A second former NAB project continued by the Santa Clara IEC, this program provides opportunities for educators to learn more about the variety of businesses and industries in the county. Visits by approximately 100 selected educators to four businesses are arranged each year.

Summer Jobs for Youth (ongoing)

As the name suggests, this project coordinates job identification and youth placement in summer jobs. Since its inception (also as a NAB project), about 1,000 jobs have been made available each summer, and approximately 800 total job placements have been made.

IEC Task Force on Electronics Instructional Programs (ongoing)

The purpose of this 11-member task force is to identify ways to increase and improve courses of study in electronics in the county.

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